

A new species of *Digitivalva* Gaedike, 1970 from Greece (Acrolepiidae)

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Abstract. A new species from the genus *Digitivalva* Gaedike, 1970 is described from Greece, *Digitivalva seligeri* sp. n. This species belongs to the species group *eglanteriella*. Keys, based on the adult characters and male and female genitalia, that allow separation of the new species from the other species of its species group, are provided.

Introduction

My friend Rudi Seliger (Schwalmtal) sent me undetermined material from Greece, which contains a small series of a species from the genus *Digitivalva* Gaedike, 1970. After a careful examination, it became obvious that these specimens belong to a new species. This species is described below.

The genus *Digitivalva* is one of four genera in the family Acrolepiidae. Hitherto 92 species of acrolepiids are known worldwide. According to Dudgale et al. (1998), this family is a member of the putative clade Plutellidae + Acrolepiidae + Glyphipterigidae + (Heliodinidae + Bedellidae + Lyonetiidae). The likely family autapomorphies (Kyrki 1984) include the details of the male genitalia (for example, the reduction of the tegumen, teguminal processes, and gnathos, and the basal widening of the phallus) and the stalking of the hindwing veins $M_1 + M_2$ and $M_3 + CuA_1$. The adults are crepuscular/nocturnal. The larvae are leaf miners or borers in stems, flower buds, and seeds. The larval hosts include Liliaceae, Asteraceae, Lamiaceae, and Solanaceae.

Currently 42 Palaearctic species of *Digitivalva* are known. The genus was described in the framework of a revision of Palaearctic Acrolepiidae (Gaedike 1970). *Digitivalva* is characterised by having the costal arm of the valva with one or more processi. Its larvae feed on various species of Asteraceae. The genus is represented in all faunal regions except Australia and Oceania. In the publication “Lepidopterorum Catalogus (New Series)” a compilation of the knowledge on the whole family was presented (Gaedike 1997).

The new species is a member of a group of species of subgenus *Digitivalva* s. str., which is characterised by the shape of the valva (see Figs 6, 8–10). Budashkin (1995) first recognized that *heringi* (Klimesch, 1956) and *eglanteriella* (Mann, 1855) are different, and this was later confirmed by Sutter & Gaedike (2003). The known distribution of these two species and the third member of this group, *pappella* (Walsingham, 1907), is in the Mediterranean region. *D. pappella* is known from the Canary Islands and from Spain, while *D. heringi* is known from the Balkan Peninsula (Croatia, Macedonia, Bulgaria, and Greece). *D. eglanteriella* is currently known from the Iberian Peninsula, Corsica, Greece, and Libya, while the records from Italy and Cyprus have not been

verified. The larval host plants are known for *pappella* (*Allagopappus dichotomus*), *heringi* (*Inula aschersoniana*) and *eglanteriella* (*Helichrysum angustifolium*).

Abbreviations

coll. Schmitz	Personal collection of Willibald Schmitz, Bergisch-Gladbach, Germany
coll. Seliger	Personal collection of Rudi Seliger, Schwalmthal, Germany
SDEI	Senckenberg Deutsches Entomologisches Institut, MÜNcheberg, Germany

Digitivalva seligeri sp. n.

Material. Holotype: ♂, "GR Peloponnes, Achaia Diakopto, Kerynia 320 m, 9.5.2009, leg. Rudi Seliger;" "Holotypus ♂ *Digitivalva seligeri* sp. n. det. R. Gaedike 2011" (SDEI). Paratypes: 1 ♂, 1 ♀, same data; genitalia slide R. Gaedike Nr. 7274 (♂), 7485 (♀); 1 ♂, same data, but 13.5.2009; genitalia slide R. Gaedike Nr. 7447 (coll. Seliger); 1 ♀, Greece, Parnass, Itea, 300 m, 18.5.2007, leg. J. Viehmann (coll. Schmitz).

Description (Fig. 1). Wingspan 11 mm; head with erect scales from neck to base of antennae, with flat scales from antennae to base of palpi, scales light grey, tip somewhat darker, above neck nearly white; labial palpi curved upwards, grey, basally lighter, antennae ringed. Thorax and tegulae grey, mixed with whitish. Forewing with indistinct pattern, background overlaid with bicoloured scales, basally whitish, tip grey; on dorsum to cell at 1/3 and after 1/2 an indistinct light brown stripe, overlaid with grey scales, between these stripes an indistinct whitish area; on costa before apex and basally fringe colouration more white than elsewhere, fringe with dark grey scales. Hindwing light grey. **Male genitalia** (Figs 5–6). Vinculum with long saccus, medially narrower, enlarged before rounded tip. Valva rounded basally, costal arm oblique, basally narrow, enlarged to truncated end with short incision. Phallus as long as whole genitalia, basally broad, curved and narrowing to a pointed tip.

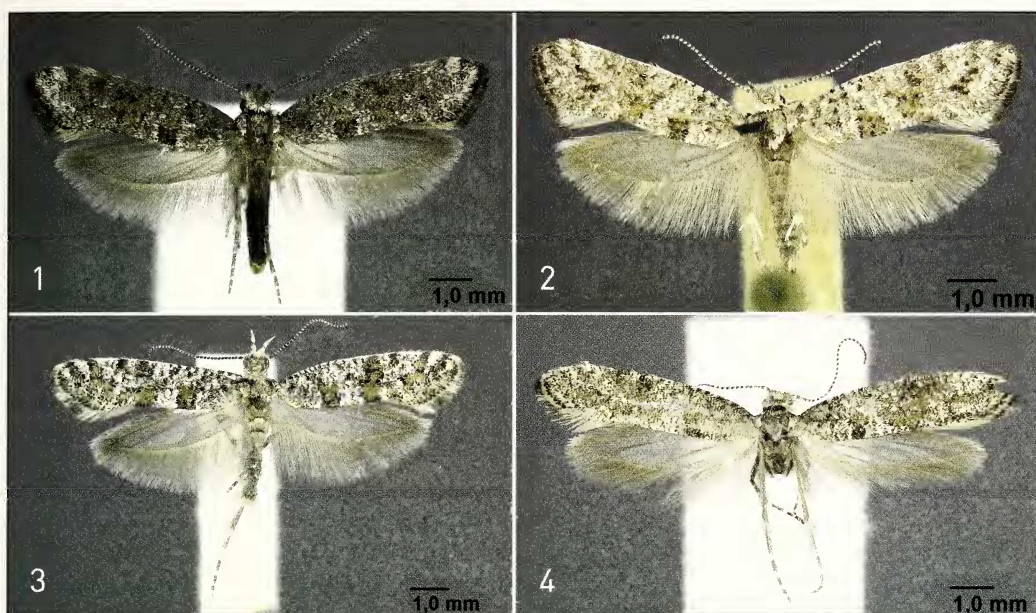
Female genitalia (Fig. 7). Cone-shaped sclerotizations between anterior apophyses small, with some bristles. Ostium ring-shaped, with prolonged sclerotization through ductus bursae as narrow stick with a pointed tip; corpus bursae proximally with numerous rows of small spines; area around ostium with somewhat stronger sclerotization as in the distal part of sternite VIII; below this area a stronger sclerotized fold.

Differential diagnosis. The new species belongs to the species-group *eglanteriella*, *heringi*, and *pappella*. Superficially it can be separated by the very indistinct wing pattern, overlaid with greyish scales, while the pattern of the other three species is more distinct, with especially brown stripes on the dorsum being always clearly visible. The shape of the valva with the apical incision is very distinct, as the valva of the other three species has a C-shaped ending. The female genitalia of the new species are quite similar to those of *eglanteriella*, and hence cannot be used in species determination.

Derivatio nominis. Named after the collector, Mr. Rudi Seliger.

Biology. Unknown.

Remarks. As some of the other members of the species group are distributed in the same area, it is possible that the new species occurs also in other areas of the Mediterranean region.



Figs 1–4. Adults of *Digitivalva* spp. 1. *D. seligeri* sp. n. 2. *D. eglanteriella* (Mann, 1855). 3. *D. heringi* (Klimesch, 1956). 4. *D. pappella* (Walsingham, 1907).

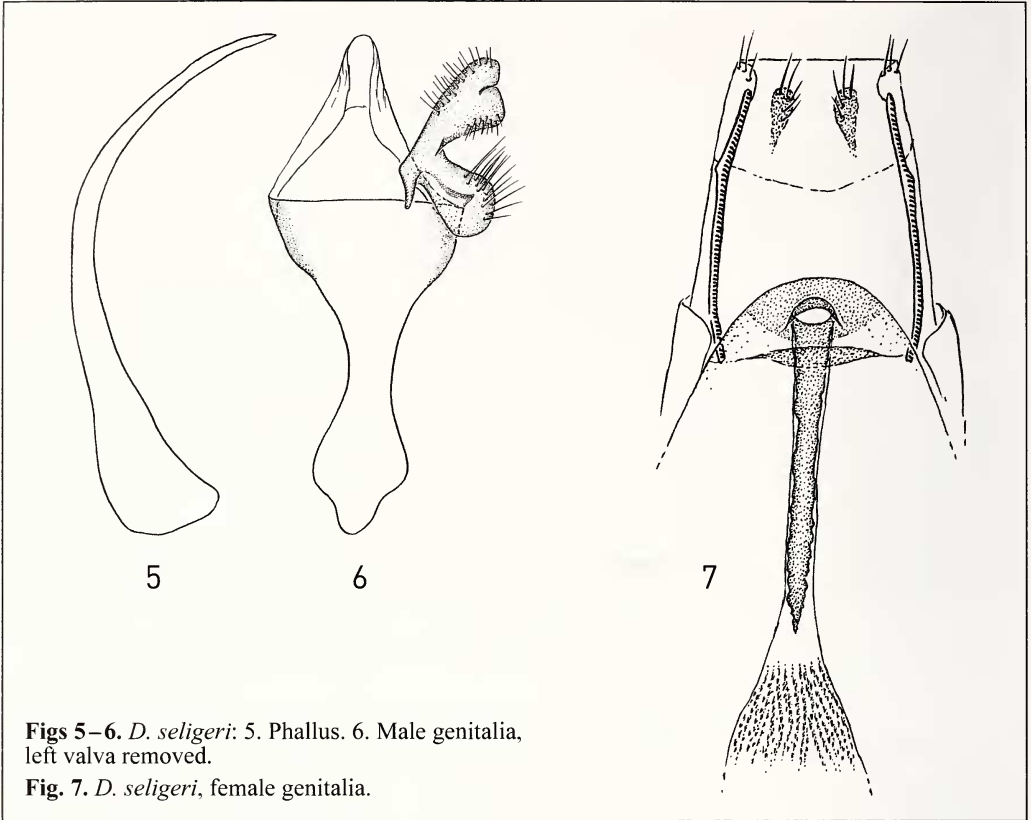
Key for separation of the four species in the species-group *eglanteriella*

Externally:

- 1 Colouration of forewing more or less greyish, pattern of light brown nearly completely overlaid by greyish scales (Fig. 1) *seligeri* sp. n.
- Brown pattern on lighter background 2
- 2 Forewing whitish, with light brown stripe on dorsum clearly defined, the whole wing with numerous short darker dots (Fig. 2) *eglanteriella* (Mann, 1855)
- Forewing: in addition to light brown stripes on dorsum, with a brown patch before apex 3
- 3 Brown pattern clearly visible, with the rest of forewing with many short narrow dark grey stripes, the contrast between these areas of the wing clearly visible (Fig. 3) *heringi* (Klimesch, 1956)
- Brown pattern overlaid with dark grey scales, ground colouration creamy (Fig. 4).
..... *pappella* (Walsingham, 1907)

Male genitalia:

- 1 Valva with apical incision (Fig. 6) *seligeri* sp. n.
- Valva apically C-shaped 2
- 2 Saccus long, narrow, with rounded tip (Fig. 8) *pappella* (Walsingham, 1907)



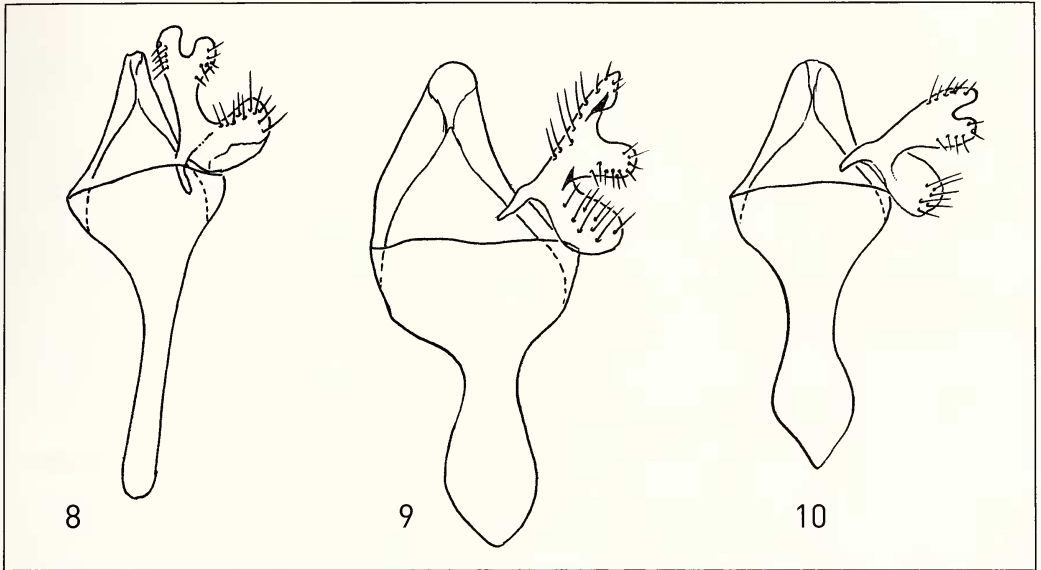
Figs 5–6. *D. seligeri*: 5. Phallus. 6. Male genitalia, left valva removed.

Fig. 7. *D. seligeri*, female genitalia.

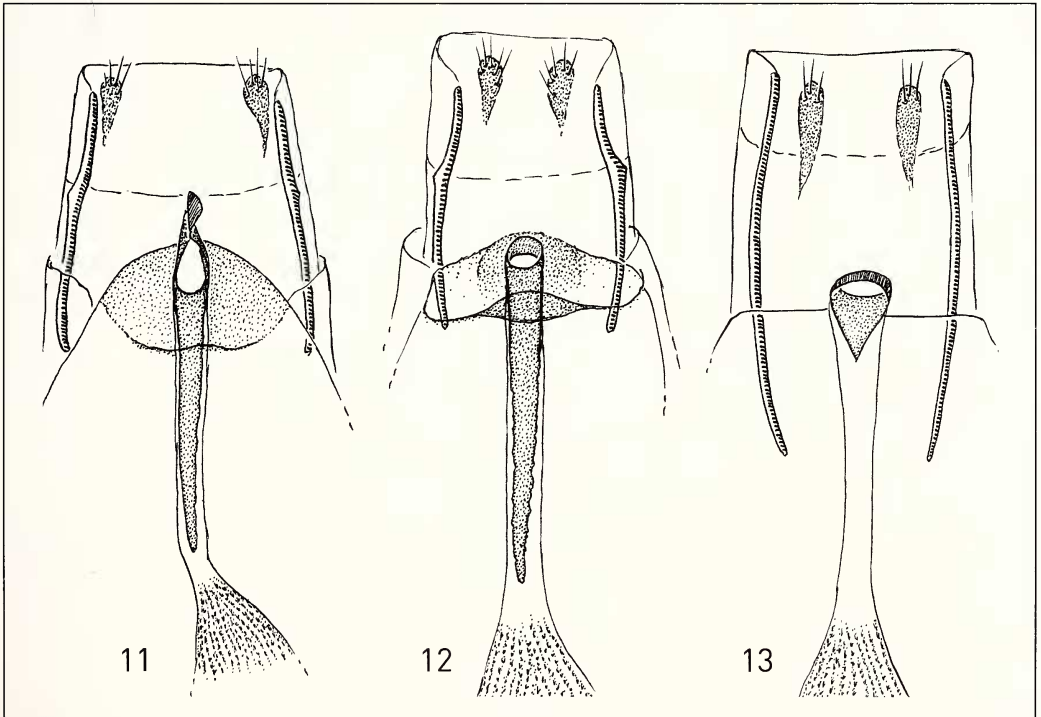
- Saccus shorter, separated into 1/2, enlarged before tip 3
- 3 Dorsal part of C-shaped end of valva longer than ventral part, narrower and pointed, ventral part rounded (Fig. 9) *heringi* (Klimesch, 1956)
- Dorsal part of C-shaped valva as long as ventral part (Fig. 10)
..... *eglanteriella* (Mann, 1855)

Female genitalia:

- 1 Ostium sclerotized, ring-shaped, triangular, prolonged into ductus bursae (Fig. 13)
..... *pappella* (Walsingham, 1907)
- Sclerotization of ostium prolonged as narrow stick through the whole ductus bursae 2
- 2 Sclerotization of ostium apically prolonged, with arrow-shaped tip (Fig. 11)
..... *heringi* (Klimesch, 1956)
- Sclerotization of ostium ring-shaped, area around ostium more sclerotized as in the rest of sternite VIII, below this area a sclerotized fold (Figs 12, 7)
..... *eglanteriella* (Mann, 1855); *seligeri* sp. n.



Figs 8–10. Male genitalia: 8. *D. pappella*. 9. *D. heringi*. 10. *D. eglanteriella*.



Figs 11–13. Female genitalia: 11. *D. heringi*. 12. *D. eglanteriella*. 13. *D. pappella*.

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